

# The Weekly Rigor

No. 295

“A mathematician is a machine for turning coffee into theorems.”

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## 10 Problems in Solving First-Degree Inequalities Involving Fractional Forms (Part 1)

### PROBLEMS

Solve each inequality, beginning by using the method of “clearing fractions,” and express the solution set using interval notation.

1.  $\frac{x}{2} + \frac{2x}{3} > \frac{3x}{4} + \frac{5}{3}$ .

2.  $5x > \frac{3x}{2} + 14$ .

3.  $\frac{2x}{5} - \frac{2x}{3} < \frac{x}{4} - \frac{31}{12}$ .

4.  $\frac{2x}{5} - \frac{2x}{3} > \frac{2x}{5} - 2$ .

$$5. 4 + \frac{x}{3} < 7 + \frac{x}{4}.$$

$$6. \frac{x}{2} + \frac{x}{6} \leq 4 - \frac{x}{3}.$$

“Only he who never plays, never loses.”